

This Stipulation Regarding the Production of Electronically Stored Information (“ESI”) and Paper Documents (the “Stipulation”) shall govern the parties in the above-captioned case (the “Litigation”).

1. Specification Modifications

Any modifications or deviations from the Stipulation may be done only by mutual agreement of the parties.

2. Production Format of ESI and Hard Copy Documents

Responsive ESI and imaged hard copy documents shall be produced in the format outlined below. All ESI, except as outlined below in sections 5 – 18, shall be rendered to TIFF image format, and accompanied by an Opticon/Concordance® Image Cross Reference file. All applicable metadata/database (see section 3 below) shall be extracted and provided in Concordance® load file format.

- a. **Image File Format:** All documents shall be produced in black and white TIFF format unless the image requires color. Documents or ESI containing color need not be produced initially in color. However, if an original document or ESI item contains color markings and it is necessary to see those markings in their original color to understand the meaning or content of the document, then the requesting party may, in good faith, request that the document or ESI item be produced in its original colors. For such documents, the requesting party shall provide a list of Bates numbers of the imaged documents sought to be produced in color. All requirements for productions stated in this Stipulation regarding productions in TIFF format apply to any productions of documents and/or ESI in color made in such an alternative format. Requests that a document be produced in color for the reasons set forth in this paragraph will not be unreasonably denied by the producing party. If a producing party wishes to object, it may do so by responding in writing and setting forth its objection(s) to the production of the requested document in color.
- b. When producing black and white paper documents scanned to images, or rendered ESI, they shall be produced as 300 dpi, 1 bit, single-page TIFF files, CCITT Group IV (2D Compression). When producing in *color*, paper documents scanned to images, or rendered ESI, they shall be produced as 300 dpi single-page JPG. Images should be uniquely and sequentially Bates numbered and unless otherwise specified, Bates numbers should be an endorsement on each image.
 - i. All TIFF file names shall include the unique Bates number burned into the image.
 - ii. All TIFF image files shall be stored with the “.tif” extension.
 - iii. Images without corresponding extracted text shall be OCR’d using standard COTS products.

1. An exception report shall be provided when limitations of paper digitization software/hardware or attribute conversion do not allow for OCR text conversion of certain images. The report shall include the Bates number(s) corresponding to each such image.
- iv. No image folder shall contain more than 2,000 images.
- c. **Unitization of Paper Documents:** Paper documents should be logically unitized for production to the extent reasonably practicable. Generally, when scanning paper documents for production, distinct documents shall not be merged into a single record and single documents shall not be split into multiple records. The parties will make reasonable efforts to unitize documents correctly.
 - i. Where a document, or a document group – such as folder, clipped bundle, box, or binder – has an identification spine or other label, the information on the label shall be scanned and produced as the first page of the document or grouping.
 - ii. The relationship among the documents in a folder or other grouping should be reflected in proper coding of the beginning and ending document and attachment fields to the extent reasonably practicable.
- d. **Load Files:** All production items will be provided with a delimited data file or “load file,” which will include both an image cross-reference load file (such as an Opticon file) as well as a metadata (.dat) file with the metadata fields identified below in Section 3 on the document level to the extent available. The load file must reference each TIFF in the corresponding production. The total number of documents referenced in a production’s data load file should match the total number of designated document breaks in the Image Load files in the production.
- e. **The extracted/OCR text** should be provided for each document as a separate single text file. The file name should match the BEGBATES# for that specific record and be accompanied by the .txt extension.
- f. **Directory and folder structure:** The directory structure for productions should be:
 - \CaseName\LoadFiles
 - \CaseName\Images < For supporting images (can include subfolders as needed, should not include more than 2,000 files per folder)
 - \CaseName\Natives <Native Files location (can include subfolders as needed, should not include more than 2,000 files per folder)
 - \CaseName\Text <Extracted Text files location (can include subfolders as needed, should not include more than 2,000 files per folder)

3. Required Metadata/Database Fields

A “✓” denotes that the indicated field should be present in the load file produced, unless unavailable. “Other ESI” includes data discussed in sections 5 – 18 below, but does not include email, email repositories and “stand alone” items (section 11), imaged hard copy material (section 9) and production from ESI collected from Smart Phones, Mobile Devices and Other Technology (section 12). Email, email repositories, and “stand alone” materials (section 11) should comply with “Email” column below. Imaged hard copy materials should comply with the “Hard Copy” column. Production from ESI collected from Smart Phones, Mobile Devices and Other Technology should comply with the requirements of section 12. The parties will meet and confer about any field which cannot be populated automatically (i.e. would require manual population of information).

Field name	Field Description	Field Type	Field Value	Hard Copy	E-mail	Other ESI
CUSTODIAN	Custodian/Source - format: Last, First or ABC Dept.	Text	160	✓	✓	✓
DUPECUSTODIAN	Custodian/Source – all custodians who had the document before de-duplication; format: Last, First or ABC Dept.	Text – semicolon delimited	Unlimited		✓	✓
DUPECUSTODIAN FILE PATH	Listing of all the file locations of the document before de-duplication	Text – semicolon delimited	Unlimited		✓	✓
AUTHOR	Creator of the document	Text	500			✓
BEGBATES#	Start Bates (including prefix) - No spaces	Text	60	✓	✓	✓
ENDBATES#	End Bates (including prefix) - No spaces	Text	60	✓	✓	✓
PGCOUNT	Page Count	Number	10	✓	✓	✓
ATTACHIDS	Child document list; Child BegBates or Child Start Bates	Text – semicolon delimited	Unlimited	✓	✓	✓
ATTACHLIST	List of Attachment filenames	Text – semicolon delimited	Unlimited		✓	✓
BEGATTACH	Start Bates number of parent	Text	60	✓	✓	✓
ENDATTACH	End Bates number of last attachment	Text	60	✓	✓	✓

Field name	Field Description	Field Type	Field Value	Hard Copy	E-mail	Other ESI
RECORD TYPE	Use the following choices: Image, Loose E-mail, E-mail, E-Doc, Attachment, Hard Copy or Other. If using Other, please specify what type after Other	Text	60	✓	✓	✓
FROM	Sender (i.e.: e-mail address, Last name, First name)	Text	160		✓	✓
TO	Recipient (i.e.: e-mail address, Last name, First name)	Text – semicolon delimited	Unlimited		✓	✓
CC	Carbon Copy Recipients (i.e.: e-mail address, Last name, First name)	Text – semicolon delimited	Unlimited		✓	✓
BCC	Blind Carbon Copy Recipients (i.e.: e-mail address, Last name, First name)	Text – semicolon delimited	Unlimited		✓	✓
SUBJECT	Subject line of email	Text	Unlimited		✓	
TITLE	Document Title	Text	Unlimited			✓
CONVINDEX	E-mail system ID used to track replies, forwards, etc.	Text	Unlimited		✓	
DOCDATE	Last Modified Date for files and Sent date for e-mail, this field inherits the date for attachments from their parent. If date is unknown, leave blank.	Date	MM/DD/YYYY		✓	✓
TEXT FILEPATH	Relative file path of the text file associated with either the extracted text or the OCR	Text	Unlimited	✓	✓	✓

Field name	Field Description	Field Type	Field Value	Hard Copy	E-mail	Other ESI
DATE TIME SENT	Date and time Sent (USE TIME ZONE OF COLLECTION LOCALITY) Numbers must be populated. If date is unknown, leave blank. Do not provide 00/00/0000	Date and Time	MM/DD/YYYY HH:MM:SS		✓	
DATE TIME CRTD	Date Created (USE TIME ZONE OF COLLECTION LOCALITY) Numbers must be populated. If date is unknown, leave blank. Do not provide 00/00/0000	Date and Time	MM/DD/YYYY HH:MM:SS		✓	✓
DATE TIME MOD	Date Last Modified (USE TIME ZONE OF COLLECTION LOCALITY) Numbers must be populated. If date is unknown, leave blank. Do not provide 00/00/0000	Date and Time	MM/DD/YYYY HH:MM:SS		✓	✓
DATE TIME RCVD	Date Received (USE TIME ZONE OF COLLECTION LOCALITY) Numbers must be populated. If date is unknown, leave blank. Do not provide 00/00/0000	Date and Time	MM/DD/YYYY HH:MM:SS		✓	

Field name	Field Description	Field Type	Field Value	Hard Copy	E-mail	Other ESI
DATE TIME ACCD	Date Accessed (USE TIME ZONE OF COLLECTION LOCALITY) Numbers must be populated. If date is unknown, leave blank. Do not provide 00/00/0000	Date and Time	MM/DD/YYYY HH:MM:SS		✓	✓
TIME ZONE OFFSET	Time zone of collection locality, relative to Coordinated Universal Time (UTC). E.g., for US Central Standard Time (CST) the value for this field should be 6.0	Decimal	10		✓	✓
FILE SIZE	Native File Size in KBs	Decimal	10			✓
FILE NAME	File name - name of file as it appeared in its original location	Text	Unlimited			✓
APPLICATION	Application used to create native file (e.g. Excel, Outlook, Word)	Text	160		✓	✓
FILE EXTENSION	Extension for the file (e.g. .doc, .pdf, .wpd)	Text	10		✓	✓
FILEPATH	Data's original source full folder path	Text	Unlimited		✓	✓
NATIVE LINK	Relative file path location to the native file	Text	Unlimited		✓	✓
FOLDER ID	Complete E-mail folder path (e.g. Inbox\Active) or Hard Copy container information (e.g. folder or binder name)	Text	Unlimited	✓	✓	

Field name	Field Description	Field Type	Field Value	Hard Copy	E-mail	Other ESI
HASH VALUE	Identifying value of an electronic record that is used for deduplication during processing. MD5 or SHA1 hash algorithms may be used, but must be kept consistent throughout all productions and communicated to Government.	Text	Unlimited		✓	✓
ATTACHMENT	Number of attachments (any level child document) associated with a parent document	Text	10		✓	
FILE TYPE	Description that represents the file type to the Windows Operating System. E.g., Adobe Portable Document Format, Microsoft Word 97 – 2003, or Microsoft Office Word Open XML Format.	Text	160		✓	✓
HAS HIDDEN CONTENT	Identifies whether the document has comments, track changes or other hidden content or data associated with it	Text	Yes/No		✓	✓
MESSAGE TYPE	Exchange Message class or equivalent	Text	60		✓	

Field name	Field Description	Field Type	Field Value	Hard Copy	E-mail	Other ESI
HAS REDACTIONS	Identifies whether a record has been produced with redactions; should be populated with Y for records with redactions and N for records without redactions.	Text	Yes/No	✓	✓	✓
CONFIDENTIALITY	Confidentiality designation assigned to the document.	Text	60	✓	✓	✓

4. Search, De-Duplication, Near-Duplicate Identification, Technology Assisted Review, E-mail Conversation Threading and Other Culling Procedures

- a. De-duplication of exact hash copies shall be performed globally – across all custodians. The custodian of each record shall be populated in the DupeCustodian field.
- b. All files should be globally de-duplicated with the following conditions:
 - i. The “DupeCustodian” metadata field (listing of all custodians who had the document before de-duplication) must be provided with the document production.
 - ii. The “DupeCustodian File Path” metadata field (listing all the file locations of the document before de-duplication) must be provided with the document production.
 - iii. All files and metadata for the duplicate documents removed during de-duplication must be preserved and available for production upon request.
 - iv. De-duplication must be done by document family, not by individual document.
 - v. For every production after the first, a separate Unified Custodian overlay shall be provided. If no overlay is necessary due to the fact that no documents de-duped out in connection with previously produced documents, this shall be expressly stated in the cover letter accompanying the subsequent production(s).
- c. The producing party shall not use any other procedure to cull, filter, group, separate or de-duplicate, or near-deduplicate, etc. (i.e., reduce the volume of) responsive material absent mutual agreement apart from email threading. The

producing party will not employ analytic software or technology to search, identify, or review potentially responsive material, including but not limited to, technology assisted review or predictive coding, absent mutual agreement.

- d. The Parties may use email thread suppression to avoid review of duplicative information, but their productions must include the suppressed thread marked as responsive.
- e. Producing parties may utilize an ESI search process to identify categories of documents, such as emails from domains typically associated with junk email, such as fantasy football-related emails, retailer advertising, and newsletters or alerts from irrelevant sources. To the extent a party opts to exclude uniquely identifiable email domain names (e.g., emails from domains typically associated with junk or irrelevant topics like sports, fantasy team competitions, retailer advertising, and newsletters or alerts from non-industry sources) as part of its initial filter of potentially responsive documents, the parties agree to disclose domain names excluded under this paragraph and to meet and confer on the timing for such disclosures.
- f. The parties may use search terms and other limiters, including, by way of example only, date ranges and email domains in metadata fields, as a means of limiting the volumes of information to be reviewed for responsiveness. To the extent that search terms are used to identify responsive ESI, a producing party will notify the requesting party of its intent to use search terms and disclose to the requesting party (1) an initial list of search terms the producing party intends to use and (2) whether the producing party intends to use different search terms with different document custodians or sources. The parties will meet and confer in good faith regarding the disclosure and formulation of appropriate search terms, document custodians, sources and protocols to cull unstructured ESI.

5. Hidden Text

ESI items shall be processed in a manner that preserves hidden columns or rows, hidden text, worksheets, speaker notes, tracked changes, and comments. If the producing party determines that preservation of such hidden information is not practicable, the producing party will disclose that determination, and the parties will meet and confer regarding processing procedures.

6. Embedded Files and File Links

All non-graphic embedded objects (Word documents, Excel spreadsheets, .wav files, etc.) that are found within a file shall be extracted and produced. For purposes of production, the embedded files shall be treated as attachments to the original file, with the parent/child relationship preserved.

The parties shall meet and confer regarding how to treat file links, including links within e-mails to centralized document repositories (e.g. MS OneDrive and Google Drive).

7. Image-Only Files

All image-only files (non-searchable .pdfs, multi-page TIFFs, Snipping Tool and other screenshots, etc., as well as all other images that contain text) shall be produced with OCR text and metadata/database fields identified in section 3 for “Other ESI.”

8. Encrypted Files

Any data (whether individual files or digital containers) that is protected by a password, encryption key, digital rights management, or other encryption scheme, shall be decrypted prior to processing for production, where reasonably possible. If the producing party determines that decryption is not reasonably possible, the producing party shall disclose that determination and the parties will meet and confer regarding processing of encrypted data. The unencrypted text shall be extracted and provided per section 2.e. The unencrypted files shall be used to render images and provided per sections 2.a and 2.b. The unencrypted native file shall be produced pursuant to sections 10-21.

9. Production of Imaged Hard Copy Records

Imaged Hard Copy documents should conform to the standards in section 2 above.

10. Production of Spreadsheets and Presentation Files

All spreadsheet, presentation, audio and video files (e.g., Excel, PowerPoint) shall be produced in the unprocessed “as kept in the ordinary course of business” state (i.e., in native format), with an associated placeholder image and endorsed with a unique Bates number. *See* section 19 below. The file produced should maintain the integrity of all source, custodian, application, embedded and related file system metadata.

11. Production of Items Originally Generated in E-mail Repositories but Found and Collected Outside of E-mail Repositories, i.e., “Stand-alone” Items

Any parent e-mail or other parent items (e.g., calendar, contacts, tasks, notes, etc.) found and collected outside of e-mail repositories (e.g., items having extensions .msg, .htm, .mht, etc.), shall be produced with the “Loose E-mail” metadata fields outlined in section 3, including but not limited to any attachments, maintaining the family (parent/child) relationship.

12. Production of ESI Collected from Mobile Devices, Messaging Platforms, Workplace Collaboration Tools and Other Technologies

The parties will first meet and confer about the presence of unique data on mobile devices and whether the same should be produced.

The responding party shall identify, collect, and produce any and all data which is responsive to the requests, collected from mobile devices, messaging platforms, workspace collaboration tools and other technologies. These technologies include, but are not limited to smart phones, cell phones, tablets, PDAs, Blackberry, smart phone data, tablet data, voicemail messaging data, instant messaging, chat messaging, text messaging, Slack, conference call data, video/audio

conferencing, workspace collaboration tools (e.g., GoTo Meeting, WebEx, MS Teams, Zoom), and related/similar technologies. The parties may meet and confer about the format for the production of such data.

All familial relationships for all data will be maintained and all messages/texts in a conversation will be produced with the same conversation index and BegAttach data (maintaining the familial relationship) allowing the parties to read the entire conversation in context. Messages should be produced to align with the formats listed in section 2 and as individual Unicode text files, and attachments should be produced as native files with images and OCR text.

The parties shall meet and confer on precise metadata formats for metadata collected from mobile devices and reach a mutually agreeable set metadata to include in those productions.

13. Production of Social Media

If a mutually-agreed upon document custodian confirms that they (1) used social media for business purposes and (2) used that social media to communicate regarding a subject relevant to the Litigation and included within a request for production, subject to objections to that request, then the requested communication(s) must be produced if it is reasonably accessible, in the producing party's possession, custody, or control, and not withheld as privileged and/or as illegal to produce under applicable privacy laws. The parties shall meet and confer to the extent there are any issues with respect to the format of such social media data.

14. Production of Structured Data

Prior to any production of responsive data from a structured database (e.g., Oracle, SAP, SQL, MySQL, QuickBooks, proprietary timekeeping, accounting, sales rep call notes, CRMs, SharePoint, etc.), the producing party shall first identify the database type and version number, discuss providing the database dictionary (in whole or part) and any user manuals, or any other documentation describing the structure and/or content of the database and a list of all reports that can be generated from the database. If a report is provided, the standard format of that report provided should be in comma separated values (.csv) format. The parties should meet and confer regarding any questions on how to interpret structured data productions.

15. Production of Photographs with Native File or Digitized ESI

Photographs shall be produced as single-page JPEG files with a resolution equivalent to the original image as they were captured/created. All JPEG files shall have extracted metadata/database fields provided in a Concordance® load file format as outlined in section 3 for "Other ESI."

16. Production of Audio or Video File Transcripts

To the extent audio or video files are produced and transcripts are reasonably available to the producing party through machine transcription, such transcripts shall be provided with the production. The producing party shall provide the audio or video file transcript as a text file in

load ready format like any other text file named by the BEGBATES#. The parties shall meet and confer regarding any required audio or video file redactions.

17. Production of ESI from Non-PC or Non-Windows-based Systems

If responsive ESI is in non-PC or non-Windows-based Systems (e.g., Apple, IBM mainframes, and UNIX machines, Android device, etc.), the parties should meet and confer about the format for the production of such data.

18. Production of Native Files (When Applicable Pursuant to These Specifications)

Production of native files, as called for in these specifications, shall have extracted metadata/database fields provided in a Concordance® load file format as defined in the field specifications for “Other ESI” as outlined in section 3 as well as a placeholder image which indicates a native file is being produced.

The parties should make reasonable efforts to produce ESI in a manner which is functionally usable including:

- a. AutoCAD data, e.g., DWG and DXF files, shall be processed/converted and produced as single-page JPG image files and accompanied by a Concordance® Image formatted load file as described above. The native files shall be placed in a separate folder on the production media and linked by a hyperlink within the text load file.
- b. GIS data shall be produced in its native format and be accompanied by a viewer such that the mapping or other data can be reviewed in a manner that does not detract from its ability to be reasonably understood.
- c. Audio and video recordings shall be produced in native format and be accompanied by a viewer if such recordings do not play in a generic application (e.g., Windows Media Player).

19. Bates Number Convention

All images should be assigned Bates numbers before production. Each Bates number shall be a standard length, include leading zeros in the number, and be unique for each produced page. The numbers should be endorsed on the actual images at a location that does not obliterate, conceal, or interfere with any information from the source document. Native files should be assigned a single Bates number for the entire file which will represent the native document in the Opticon/Concordance® Image Cross Reference file. The load file will include a reference to the native file path and utilize the NATIVELINK metadata field). The Bates number shall not exceed 30 characters in length and shall include leading zeros in the numeric portion. The Bates number shall be a unique number given sequentially (i.e., page one of document is PREFIX0000000001, page two of the same document is PREFIX0000000002) to each page (when assigned to an image) or to each document (when assigned to a native file). If the parties agree to a rolling production, the numbering convention shall remain consistent throughout the entire production.

There shall be no spaces between the prefix and numeric value. If suffixes are required (e.g., to produce a document that was originally produced as a placeholder), please use “dot notation.” Below is a sample of dot notation:

	<u>Document #1</u>	<u>Document #2</u>
<i>Page #1</i>	PREFIX000000000001	PREFIX000000000002
<i>Page #2</i>	PREFIX000000000001.002	PREFIX000000000002.002
<i>Page #3</i>	PREFIX000000000001.003	PREFIX000000000002.003

20. Media Formats for Storage and Delivery of Production Data

Electronic documents and data shall be delivered on any of the following media:

- a. CD-ROMs and/or DVD-R (+/-) formatted to ISO/IEC 13346 and Universal Disk Format 1.02 specifications; Blu-ray.
- b. External hard drives (USB 3.0 or higher, formatted to NTFS format specifications) or flash drives
- c. Mutually acceptable File Transfer Protocol (FTP) technologies.
- d. Storage media used to deliver ESI shall be appropriate to the size of the data in the production.
- e. Media should be labeled with the case name, production date, Bates range, and producing party.

21. Virus Protection and Security for Delivery of Production Data

Production data shall be free of computer viruses. Any files found to include a virus shall be quarantined by the producing party and noted in a log to be provided to the receiving party.

22. Compliance and Adherence to Generally Accepted Technical Standards

Production shall be in conformance with standards and practices established by the National Institute of Standards and Technology (“NIST” at www.nist.gov), U.S. National Archives & Records Administration (“NARA” at www.archives.gov), American Records Management Association (“ARMA International” at www.arma.org), American National Standards Institute (“ANSI” at www.ansi.org), International Organization for Standardization (“ISO” at www.iso.org), and/or other U.S. Government or professional organizations.

23. Transmittal Letter to Accompany Deliverables

All deliverables should be accompanied by a transmittal letter including the production date, case name and number, producing party name, and Bates range produced. Technical instructions on how to decrypt media should be included in the transmittal letter but the password should be transmitted separately.

24. Confidentiality Designations

If a particular paper document or ESI item qualifies for confidential treatment pursuant to any applicable federal, state, or common law (e.g., personally identifiable information or protected health information), or to the terms of a protective order entered by the Court in the Litigation or a confidentiality stipulation entered into by the parties, the designation shall be branded on the document's image at a location that does not obliterate or obscure any part of the underlying images. This designation also should be included in the the load file. For documents produced in native format with image placeholders, the placeholder image for the native file should be branded with the appropriate confidentiality designation to the extent possible. Requesting parties shall ensure that the confidentiality claim follows the document regardless of whether the designation imprints on the file when viewed in printed form. Failure to comply with the procedures set forth in this Stipulation, any protective order or confidential order, or any confidential stipulation shall not waive any protection or confidential treatment. The parties recognize that document review using technological means may result in the application of greater or lesser confidentiality designations than otherwise appropriate. The parties agree to work together on an as-needed (and per document) basis to address any potential over (or under) designation.

25. Redaction

The parties agree that, where ESI items need to be redacted, they shall be produced solely in TIFF format with each redaction clearly indicated. Any metadata fields reasonably available and unnecessary to protect the privilege protected by the redaction shall be provided. The parties understand that for certain MS Excel documents or other file types or files, TIFF redactions may be impracticable. These documents may be redacted in native format. If the items redacted and partially withheld from production are audio/visual files, the producing party shall, to the extent reasonably practicable, provide the unredacted portions of the content. If the content is a voice recording, the parties shall meet and confer to discuss the appropriate manner for the producing party to produce the unredacted portion of the content.

26. Clawback

Pursuant to Fed. R. Evid. 502(d), the production of a privileged or work-product-protected document is not a waiver of privilege or protection from discovery in this case or in any other federal or state proceeding. A producing party may assert privilege or protection over produced documents at any time by notifying the receiving party in writing of the assertion of privilege or protection. After being notified, a party must promptly return or destroy the specified information and any copies it has and may not sequester, use or disclose the information until the claim is resolved. This includes a restriction against presenting the information to the court for a determination of the claim. Information that contains attorney-client privilege or attorney work product shall be returned immediately if requested. Nothing in this Stipulation shall be interpreted to require disclosure of irrelevant information or relevant information protected by the attorney-client privilege, work-product doctrine, or any other applicable privilege or immunity. The parties do not waive any objections to the production, discoverability, admissibility, or confidentiality of documents and ESI.